TABLE OF CONTENTS

FEATURED SPEAKERS *Page*

Keynote Speech—The Use and Conservation of Human Resources
Wilson J. Bentley 3

The Man in Manpower and Management
Thomas P. Gerrity 8

Human Productivity and Tool Design
Earl D. Long 12

MANAGEMENT: DYNAMICS OF MANAGING CHANGE

Business Decision-Making Simulation—Purposes and Applications
Donald G. Malcolm 23

Motivation Controls
Max B. Skousen 28

Developing and Measuring Managers
Robert T. Edgar 33

AEROSPACE

Planning a Dynamic Industrial Engineering Role in the Organization
Herman A. Haefele 41

The Industrial Engineer—An Internal Consultant
Phil N. Scheid 49

A New Dimension in Contract Management—The Industrial Engineer
David L. Belden 57

California Transportation . . . Tomorrow
Jack J. Jones 63

ENGINEERING ECONOMY

Estimation Deviations: Their Effect upon the Benefit-Cost Ratio
Raymond Price Lutz 71

GOVERNMENT

An Evaluation of Linear Programming and Multiple Regression for Estimating Manpower Requirements
Raphael R. Thelwell 83

Input/Output Analysis of Organizations Having Intangible Outputs: 10 AO 10 Technique
John Moundalexis and Warren Lichtenberg 94

Administering Federal Property and Records
Thomas E. Hannon 102

TRANSPORTATION

Bay Area Rapid Transit System
D. G. Hammond 111

Modern Industrial Engineering Techniques in an Age-Old Industry
Sven I. Thoolen 115

Potentials for On-Line and Real-Time Systems
Guerdon S. Sines 125

PLANT LAYOUT AND MATERIALS HANDLING

The Application of Drive-Through Racks and Palletless Material Handling to a Grocery Products Distribution Warehouse
Charles E. Hancock 133

Digital Computer Control of an Automated Multi-Product Production Line
H. H. Young 143

A Probabilistic Model for Machine Determination
Ruddell Reed, Jr. 153

HOSPITAL INDUSTRIAL ENGINEERING

Hospital Industrial Engineering
Harold E. Smalley 167

Work Sampling in a Hospital Rehabilitation Unit
Edward J. Rising and Roger N. Millen 176

Linear Programming Models for Planning Selective Hospital Menus
Ronald L. Gue 183

MANPOWER UTILIZATION AND MEASUREMENT

The Measurement and Utilization of Indirect Labor—An Application in Maintenance
George M. Parks 189

A Dynamic Performance Measurement System for Inspection Departments
Henry H. Falik 197

Creativity—Choice or Chance?
John M. Hueter 206

Mechanized Engineering Construction Assemblies
James N. Salapatas 214

A Computer Program for Time Study Analysis
Kenneth K. Kopp 222

Using Work Measurement Sampling, Electronic Data Processing and Statistical Techniques to Establish an Indirect Labor Measurement Program
William A. Fatora 229

Industrial Engineering in Maintenance—A Manager's Viewpoint
Karl F. Gumnick 236

Time Study Electronic Data Processing
John T. Kirby and William V. Santos 244

HUMAN FACTORS

Dynamics of the Center of Mass of the Arm Aggregate
M. M. Ayoub and Virgil B. McElhannon 251

VALUE ENGINEERING

Value Engineering in Systems Management
Frank J. Johnson 263

Value Engineering in Perspective
C. W. Doyle 267

PLANNING AND CONTROL MODELS

Critical Path Scheduling: Tableau Method
James L. Riggs and Michael S. Inoue 273

A Systems Analysis Case Study: Emergency Disaster Relief Operations of the Agency for International Development
Gerald A. Fleischer and Anthony K. Mason 283

Trade-off Approaches to System Evaluation
Peter R. Fatianow 292

Measuring Company Productivity
Charles D. Hoyt, Jr. 303

Product Cost Control Reporting System
Lee C. Estabrook 310

Use of Multi-Variate Techniques for the Analysis of Work Measurement Data
Richard C. Jelinek and Wilbert Steffy 315

ORGANIZATION—PROGRAM PARTICIPANTS

Institute Officers, 1965–66 325

Conference Organization 327

Host Chapter Officers 328

Program Participants 329